The Development of Teaching and Learning Through the Use of ICT in the Latin Classroom

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In this article I intend to show how the use of Information and Communication Technology (ICT) has the potential to improve pedagogical practices in the teaching and learning of Latin. It is useful to make comparisons with modern foreign language (MFL) teaching and research. Firstly I describe the three ways researchers and teachers have characterized the use of ICT in Modern Foreign Languages (MFL) and suggest how they might be applied to ancient languages, specifically Latin. Secondly I discuss the potential of ICT for monitoring and assessment. Thirdly I consider the potential of the Interactive Whiteboard (IWB) to develop pedagogical practices. Finally I consider the importance of ICT in developing pupils' understanding of the classical world.

There has been very little published literature which describes or evaluates the use of ICT in Latin teaching. And yet ICT has long played an important role, as Rob Latousek comments,

‘Classics has been proudly in the vanguard of research and development in educational computing almost since its origin. We may not have the same abundance of materials available to other fields, due to our relative size, but we do have some of the most distinguished examples of software available to any discipline, and we have a fairly good sampling of materials in all the typical subject areas.’ (Latousk, 1998, p. 263).

ICT is, of course, a title for a very broad range of technologies: the author is old enough to remember ‘Movement, Mime and Music – a radio-programme from the BBC played on Thursday mornings to which we cantered about like antelopes or cowered like mice according to the instructions boomed out at us from the loudspeaker in the school hall’. In the classroom, ICT has evolved through tape-recorders, television, overhead projectors, desktop and laptop computers, to the visualisers, interactive whiteboards and all the associated computer programmes and digital resources of the present day. The types of ICT used in the MFL classroom have come to be generalized as Computer-Assisted Language Learning (CALL) technologies and have been at the forefront of developments in foreign language learning for several decades now. This has not been without reason: extensive research has shown that ICT generally has a positive effect on pupil attainment, motivation and learning, and that of all subject areas ICT has the strongest impact on performance in foreign languages at GCSE level (Evans, 2009).

Computer-Assisted Language Learning (CALL)

Three main types of CALL have been characterized. Structural CALL or ‘computer as tutor’ is based on computerized drill and practice programmes with a strong emphasis on grammar which are designed to improve pupils' language accuracy (Gruba, 2004). Communicative CALL focuses on the use of technology to promote ‘meaningful peer interactions’ (ibid). Integrative CALL has been defined by Gruba as when ‘[it] makes full use of networked computers as a means to engage learners in meaningful large-scale collaborative activities.’ (ibid). Gruba would today no doubt change his reference to ‘networked computers’ to ‘all types of digital platforms and resources’. Teachers of MFL are, of course, more concerned with the productive use of language than are teachers of Latin and CALL is important for them to give pupils opportunities to listen, speak, read and write in the target language. But I would argue that CALL is just as beneficial to the pupil of ancient languages.

Structural CALL plays a big part in the learning of Latin today. Rote-learning and pen-and-paper testing is still seen by many teachers to be of importance in the learning of Latin, especially among those who are still devoted to the so-called ‘Grammar-Translation' methodology. But there is also evidence that pupils who are going to be analysing literature in detail need a firm grasp of the specific types of vocabulary which the literature is going to employ. ICT can provide a relatively efficient way to learn vocabulary. Goodhew (2003) explains the advantages:

‘One advantage of computerised grammar or vocabulary drills... is that students can work at their own pace, thus allowing the brighter ones [sic] to press on while the weaker ones consolidate. Another plus is the fact that the computer has unlimited patience, will not get cross, and will not cause a pupil to feel embarrassed for making errors; furthermore, the drilling can be done at any time, not just during lessons. Finally, the culture associated with computer games means that pupils will go far beyond a written test in order to achieve a highest score.’ (Goodhew, 2003, p. 139).

What Goodhew does not mention...
is whether these sorts of programmes enable pupils to learn vocabulary better than if they were to use traditional methods. Research suggests that there is no difference between pen-and-paper tests and the use of ICT (Evans, 2009). Nevertheless, the use of these sorts of programmes does release time for other learning opportunities. As nearly all pupils have access to computers and mobile digital technology and as they have almost constant access to the internet, they can access ICT almost at will. The task for the teacher has become not so much one of providing but one of guiding, monitoring, accessing and feeding back. Let us consider the Cambridge Latin Course (CLC) digital vocabulary tester. Would it be better for the pupil to use the ‘multiple-choice’ version or the ‘type in the answer’ version? The former might be considered a better way to learn, but the latter a more effective way to assess. Should the pupil do the ‘Latin-into-English’ or the ‘English-into-Latin’ version? How many words should they set themselves, and in how much time? More importantly, should the pupil complete the task in class or away from class? And in either of these cases, how should the pupil and the teacher monitor their progress? The digital CLC vocabulary tester gives feedback about which words were correct and which were incorrect. How could the pupil and the teacher use that information unless it is written down somewhere? Should the pupil keep a score? Ought they to keep a note somewhere of the words they keep on getting wrong? Should the teacher be keeping an eye on this? The point I am making is that the teacher needs to think very carefully about how best to use drilling programmes. When a pupil uses ICT it is very easy for the teacher to let them just ‘get on with it’. Instead, the teacher should remember to keep the pupil focused and engaged with learning just as much as in a normal classroom situation.

Communicative CALL might not seem at first sight to be part and parcel of the Latin teacher's repertoire. And yet, of course, it already is. Any method of teaching which gets pupils to read aloud, speak and write for each other and for other audiences is communicative. ICT simply makes it easier and more engaging. Many of the activities already available through, for example, the digital CLC resources can be considered to consist of Communicative CALL. Even old-fashioned tape-recordings of Latin stories could be considered to be early examples of Communicative CALL. Today’s more sophisticated digital CLC video dramatizations are the exact equivalent of authentic video materials used in MFL, and listening to the recordings of the model sentences and stories serve to internalise understanding of vocabulary in the same way, if they are done regularly and consistently. Through all sorts of resource - podcasts, video-making – many other forms of digital interaction are all now easily within reach of the teacher and pupils. Some of these interactions may be extremely simple. For example, teacher Anna Andriesan shows cartoons in class, but with the sound turned off pupils take turns narrating the story in Latin (Reinhard, 2012). Even more simply, pupils might just record their voices on their smartphone as they read through a Latin story, paying close attention to personal pronouns and the endings of verbs. Others may be much more complex. There are many examples on YouTube of pupils who have made videos, performed songs and animated stories in Latin. ICT, as it becomes quicker to use and cheaper to buy, has become even more easy to work with in the classroom. In the past, creating a Latin video seemed to take so much time and energy that the teacher might well have felt that they were teaching film-making rather than Latin. Few Latin teachers could afford so much time for such an activity. Therefore this potentially very effective language learning activity tended to be relegated to a ‘treat’ at the end of the year after the exams were over, or else it could be left to keen pupils to create in their own time or in a lunchtime club. Now, however, the use of tablet computers is becoming more common in classrooms today and their intuitive operating interfaces can make such activities as creating an e-book, a video, a stop-motion film or animation extremely quick and easy to achieve. This creative use of ICT can now be more effectively harnessed as a normal part of the lesson because the burden of teaching how to operate the computer or the programme has been much reduced and the focus can now be on its use to learn or practice Latin. For example, pupils of mine produced a five minute animation of the story of Barbillus and the Crocodiles (from Stage 20 of the CLC) as a ten minute extension activity using the Puppet Pals app on an iPad. They had received a few minutes’ minimal instruction on the technicalities of the programme before they carried it out. To my mind these sorts of Communicative CALL have great potential in encouraging pupils to learn how to comprehend Latin. And the reason for this? Because they make pupils engage actively with the Latin language. And I do not just mean that they have to ‘compose’ Latin (although sometimes an element of that comes into it). When they watch a digital CLC video dramatization, they see apparently authentic interactions between Romans – or at least as close as they might be able to. To hear words and see the accompanying gestures and interpersonal interactions all have a powerful effect on helping to understand and to learn a language. It’s as close to going to ancient Rome as they are ever going to get and is almost as authentic an experience as watching a video of a French shop assistant in a boulangerie. The actions that are performed and the settings themselves help pupils learn, recall and consolidate vocabulary and the sense of what it was like to ‘be a Roman’ – a sense that will stand them in good stead in their further reading and give them the cultural literacy that will enable them to understand original authors more easily in the future. Next, if they get so far as being able to make their own podcast, animation or video in the persona of a Roman, they should also be able to draw on a much wider range of materials and ideas. Communicative CALL therefore gives pupils the opportunities to meet and use the words in as many different contexts as is possible and should be part of the Latin teacher’s standard repertoire.

Integrative CALL is becoming common practice amongst all Latin teachers – especially among those who use course textbooks with associated ICT and web-based features. In Lister and Seranis’ survey of Classics teachers’ preferences for using digital or printed materials, 29% of respondents said that they learnt better using printed materials, 59% said that they learnt better using printed materials, and 11% expressed no preference (Lister & Seranis, 2005). If teachers themselves prefer a more mixed-methods approach to teaching and learning, how much more likely is it that the pupils do so as well? As Counsell says:

‘Teachers do not generally confine themselves to a single method of teaching throughout a lesson. They do not write on the board for an hour, or have pupils working from the text book for an hour. Why should computers be any different?‘ (Counsell, 2003).

But it is not enough just to use computers every now and then, or to
Interactive Whiteboard Technology in the Classics Classroom

ICT has the potential to develop teachers’ practices as well as pupils'. The biggest shift in pedagogical practice has been the normalisation in the classroom of the use of data-projectors and interactive whiteboards (IWB). The IWB has been one of the most successful forms of ICT because it enables teachers to vary their teaching style without having to make significant changes in their pedagogical approach (Lee & Winzenried, 2009): teachers replace the chalk with a stylus (or even a finger), and write on a board as before. The evidence so far is that learning Latin using the IWB has the potential to become more participative and engaging, encouraging much greater dialogue between teacher and pupils and between pupils themselves (Hunt, 2008; Paterson, 2012; Smith, 2012). The IWB is easy to operate by both teacher and pupil; embedded programmes make it easy to bring out resources on demand; and images and text can be digitally manipulated, saved, brought back or disseminated. Annotation can also be recorded in real time, so that play-back can happen for pupils who missed the lesson or who wish to revise. In the teaching of Latin much emphasis is placed on the close interrogation of the Latin text. The creation of these annotated texts - so-called digital artefacts - and their power to support classroom dialogue (Hennessy, 2011) has huge potential in Latin teaching. Betcher and Lee have devised a kind of taxonomy of teachers’ developing use of the IWB which is helpful to discuss here. They start with teachers using basic IWB adaptions of lessons which they have always done, and finish with teachers using increasingly sophisticated and interactive presentations:

Phase 1:
To start with, teachers persist in doing old things in old ways.

• Notes are still handwritten on the board, using the stylus;
• Word documents or scanned materials are projected onto the screen;
• Limited use of the IWB’s integrated toolset;
• Lessons are not prepared in advance;
• No advantage is taken of the interactive features of the IWB;

• Lessons are not saved at end of class.
• The teacher works in isolation, not sharing resources with others.

Phase 2:
As they start to understand the technology, teachers continue doing the old things but in new ways.

• Modification of existing paper-based worksheets and activities to work on the IWB;
• Effective use of software that works on the IWB;
• Greater use of flip-chart lessons prepared in advance;
• Use of draggable, layered objects that can be moved around the screen, revealing existing words and objects.
• Lessons are saved / shared;
• There is greater reliance on resources from photo-galleries or the web;
• Lessons shared with other teachers to reduce individual workloads;
• Noticeably increased levels of student engagement and interest.

Phase 3:
As they begin to master the technology, teachers gradually start trying new things in new ways.

• The use of short snippets of video or animation that do a far better job than simple diagrams;
• The inclusion of high resolution photos that give the ability to zoom in to inspect the finer details of an image;
• Tapping into the enormous libraries of interactive learning objects and embedding these into lessons so that the students are able easily to explore the ‘what if’ possibilities;
• Greater use of software that enables pupils to manipulate ideas, seeing what happens to the final outcome if a variable is changed here and there;
• The ability to engage with virtual worlds and simulated environments to explore possibilities that cannot be explored in any other way;
• Increased levels of interactivity and student involvement, often raising questions that were unexpected but with answers that offer greater insight into and deeper understanding of a topic;
• The use of real-time video communication software to facilitate class-to-class collaboration, or even to bring guest speakers over the web, so that students can ask questions and interact with others outside their classroom;
• The use of interactive voting systems to gauge student understanding of key concepts in real time. (Betcher & Lee, 2009, pp. 50-53).

This taxonomy is useful for teachers at all stages of their development to gauge their performance using the IWB. Teachers I have worked with have found it a helpful tool to recognize existing practices and to identify their next moves. Those who might be entering the third Phase will be developing skills which are already moving beyond the IWB itself – the manipulation of digital and audio technology, searching the internet, using other sorts of software applications. But we must remember that it is not a race!

Is Your ICT Really Necessary?

Teachers should not feel obliged to use ICT every time in their lessons. Nor should they use ICT just for the sake of ‘variety’. Counsell recommends that a teacher should consider whether the activity they are planning to teach is what she calls a ‘Type A’ or a ‘Type B’ activity (Counsell, 2003). ‘Type A’ activities are ICT-dependent: these activities cannot take place without an element of ICT. In Classics this might consist of a discussion about a previously-viewed film or documentary, the viewing of a Google Earth ‘walk-through’ of Pompeii, the recording of a Roman site with a digital camera, the use of a specialist website such as ORBIS or the digital CLC video documentaries or drag-and-drop exercises. ‘Type B’ activities are ICT non-dependent: it might be good to use ICT, but it is not essential. Examples of these might be the comprehension or written translation of a passage of Latin (using a printed text or a projected digital text), learning vocabulary (using pen and paper or a drilling programme), or learning about the invasions of Britain by the Romans using inscriptive evidence (using a text book or the internet).

ICT, Learning and Assessment

In the same way, we should be careful that both we as teachers and pupils alike do not get carried away by the creation of digital materials and let them obscure the fundamental aim of learning the Latin. The main point about ICT is that it makes carrying out of the activity more efficient and thus frees up time to carry out the thinking process. Thus making a database of vocabulary is the quicker part; the decision how to group the words (1st declension nouns or members of the family? – you choose!) is the slower and more reflective part. Recording and editing a 5 minute video of a reading of ‘O fons Bandusiae’ is relatively easy with an i-Pad; ensuring the performance shows the correct metrical values and pronunciation the difficult part – and the part the teacher wants the pupil to spend time on. A pupil can complete an interactive CLC drag-and-drop exercise on the IWB in the classroom so quickly it is almost over and done before the teacher can think about it; but that then allows time in the classroom for the same pupil to explain their reasoning to the teacher and the rest of the class why they chose to drag a particular word to a particular place.

In other words, ICT can provide an opportunity for the teacher to ensure that the focus is on the process of learning, not just the end result. The teacher is not really interested in the power of ICT to produce stories or posters with fancy fonts and borders, well-illustrated PowerPoints with superfluous animations, or professional-looking videos which can be loaded straight onto the school website. These sorts of pupil products are all fine in themselves, but reveal little of the pupil’s thought processes. What the teacher has to do is to engineer into the lesson in which ICT plays a part an opportunity or opportunities for the pupil to stop, think and make a proper decision, or express a preference, or to rationalize something, or explain their thinking. ICT then becomes not just an activity for its own sake but is used because of the particular features or functions it has which can promote deeper learning in the subject at hand. ICT can be another teacher or many other teachers in the classroom, not a replacement for the teacher.

ICT can provide a valuable method for self-assessment. Thus, for example, when using a vocabulary tester, a pupil might maintain an electronic spreadsheet and enter the words they do not know; when using the digital CLC Explorer tool while making a traditional written translation of a Latin story, a pupil might keep a record of the words which they clicked on more than three times and write them at the bottom of the translation; or, when making a podcast of a part of a speech of Cicero, the pupil might also record their thoughts about how they set about reading the passage as well as recording the final version. In other cases, more traditional forms of assessment and monitoring are appropriate. For example, in a whole-class discussion of a Latin story projected onto the IWB, a pupil might explain something to the class about the story before them, such as how many words were in the imperfect tense, how they could tell, and what might be the best translations for each of them (to give a very simple example). More sophisticatedly, the IWB could be used to set up two different ideas (such as two different translations of the same piece of literature) against one another: the resulting ambiguity is a powerful learning tool when pupils are asked to try to resolve it. Or, using other video and audio technologies, pupils might have a preliminary discussion about the way in which they were going to record a scene from a Latin story, with the teacher monitoring or guiding alongside. Or, while watching a video dramatization of digital CLC story, pupils might be encouraged to write down two points about each of the characters they see to ask about in a follow-up question and answer session. ICT can encourage pupils to concentrate on the problem-solving aspects of learning rather than on the mundane procedural or production aspects; it can support classroom dialogue and provide a more enriching and powerful learning experience; and it can allow the teacher to diagnose pupils’ understanding more efficiently.

ICT and ‘Classical Literacy.’

Structural CALL, in Latin teaching is important. But learning a language – even a dead one – can be so much more than memorizing vocabulary and charts. If the aim of teaching Latin is to enable pupils to be able to read and comprehend original Latin they need to be given experiences which enable them to make sense of what it is like to be a Roman – we need to ensure they possess the ‘Classical Literacy’ which will enable them to make more sense of
the original authors which they are going to read (Kitchell, 2000). Communicative CALL offers pupils many more ways to hear the language, to see ‘Romans’ doing Roman things and speaking Latin, and to interact regularly with each other and with the teacher. Whenever pupils see a video-dramatization of an CLC story they are picking up innumerable clues about the meaning of words through their cultural setting and social interactions. Even when pupils watch a TV documentary on the Romans or a Hollywood blockbuster like _Antony and Cleopatra_ or _I, Claudius_ they will be given an advantage when it comes to reading an original author. Communicative CALL gives teachers far more opportunities to monitor and assess understanding than they have through traditional methods of paper tests and written exercises. And the activities are more engaging and motivating for pupils as well.

**Conclusion**

Those teachers who regularly use the IWB are already on the road to integrate ICT into the classroom. They do this because they recognise that individual types of ICT perform specific functions to aid effective learning. Technology is already moving on. How many teachers (let alone pupils) have used a dictionary app on their smartphones when they want to check a word? And will teachers want to encourage pupils to use the internet when they are at their desks with their e-books? These are questions teachers will have to address in the next few years as mobile digital technologies become as much a feature of the Latin classroom as IWBs are now.

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**References**


Counsell, C. (2003). _The Forgotten Games Kit: Putting Historical Thinking First in Long-, Medium-, and Short-Term Planning_. In T.


2 Movement, Mimes and Music was a BBC Schools Radio series for age 9-11 which ran from 1962 to 1969.

3 For further discussion of the effectiveness of these CALL approaches, see Evans (2009)

4 For a brief history and explanation for the early popularity of the ‘Grammar-Translation’ method, see Richards and Rogers (2001).

5 Frequently-used drilling programmes are those on the CSCP website (www.cambridgescp.com), or available through Centaur systems, or through resources such as www.quia.com.

6 www.youtube.com

7 There are many such creative animation apps which achieve this, such as ‘Puppet Pals’, ‘Morfo Booth’ and ‘i-motionHD’; for more general educational apps which have potential in presenting ideas in attractive formats, see ‘SimpleMinds’, ‘EducRations’, ‘Explain Everything’ and ‘Notepad++’. 

8 www.maps.google.com

9 Of these, the digital resources of the CLC are by far the most commonly used in the UK, although there are also web-based resources now available for Ecce Romani, the Oxford Latin Course and the other major US course textbooks. In a recent visit to the American Classical League 2013 conference in the US I was struck by how many states now _require_ school course text books to have associated ICT and web support and also how some schools were abandoning printed text books altogether.

10 I am mindful of the use of ‘PreZap’, for example, which seems to have overtaken PowerPoint as a classroom favourite among pupils of mine. But I am also thinking of the use of blogs, podcasts and videos as presentational media to other audiences.

11 www.orbis.stanford.edu